

CLAIMS

1. (Previously presented) A method for assembling carbon particles into at least one aligned carbon fiber, the method comprising the step of drawing glass containing said carbon particles so as to form at least one carbon fiber from said carbon particles.
2. (Original) The invention as defined in claim 1 wherein said carbon particles are carbon nanotube molecules.
3. (Original) The invention as defined in claim 1 wherein said carbon particles are carbon fibrils.
4. (Original) The invention as defined in claim 1 further comprising the step of twisting said fiber.
5. (Original) The invention as defined in claim 1 further comprising the step of twisting said fiber while heating said fiber to facilitate its twisting.
6. (Original) The invention as defined in claim 1 further comprising the step of heating said glass containing carbon particles while drawing it.
7. (Currently amended) The invention as defined in claim [[1]] 46, wherein said ~~drawing expelling~~ step produces a plurality of aligned carbon fibers, ~~the method further comprising the step of comprises~~ twisting said plurality of aligned carbon fibers, whereby said aligned carbon fibers are drawn towards the axis of said fiber so as to expel glass that was located between and within said aligned carbon fibers prior to performing said twisting.
8. (Original) The invention as defined in claim 1 further comprising the step of forming said glass containing carbon particles.
9. (Original) The invention as defined in claim 8 wherein said forming step further comprises the step of solidifying a mixture of carbon particles within a sol-gel solution whereby a body is formed.
10. (Original) The invention as defined in claim 9 wherein said forming step further comprises the step of dispersing carbon particles within said sol-gel solution to form said mixture.
11. (Currently amended) The invention as defined in claim [[9]] 45, wherein said solidifying step further comprises the step of adding an ester to said sol-gel solution mixture.
12. (Currently amended) The invention as defined in claim [[9]] 45, wherein said body is porous.
13. (Currently amended) The invention as defined in claim [[9]] 45, further comprising the step of imbuing said body with at least one other material.

14. (Currently amended) The invention as defined in claim [[9]] 45, further comprising the step of heating said glass body preform to consolidate it, whereby a consolidated body is formed.

15. (Currently amended) The invention as defined in claim [[9]] 45, further comprising the step of incorporating said glass body into a larger structure body to form a preform.

16. (Currently amended) The invention as defined in claim 15, wherein said larger structure body is a glass structure body having a hole that is sized to receive said glass body.

17. (Currently amended) The invention as defined in claim 15, ~~wherein said incorporating step~~ further comprising ~~comprises~~ the step of heating said preform ~~larger body~~ to consolidate it.

18. (Currently amended) The invention as defined in claim 15 further comprising the step of incorporating at least one other body into said larger body so that said preform ~~perform~~ contains multiple bodies.

19. (Previously presented) The invention as defined in claim 1 further comprising the step of removing some glass from said carbon fiber.

20. (Previously presented) The invention as defined in claim 19 wherein said glass that is removed is from an exterior portion of said carbon fiber.

21. (Original) The invention as defined in claim 19 wherein said removing is performed using at least a mechanical process.

22. (Original) The invention as defined in claim 19 wherein said removing is performed using at least a chemical process.

23-25. (Canceled)

26. (Currently amended) A method for assembling carbon particles into at least one aligned carbon fiber, the method comprising the step of drawing a preform of glass containing carbon particles ~~into~~ so as to form said carbon fiber, whereby said carbon particles are substantially aligned.

27. (Original) The invention as defined in claim 26 wherein said carbon particles are carbon nanotube molecules.

28. (Original) The invention as defined in claim 26 wherein said carbon particles are carbon fibrils.

29-39. (Canceled)

40. (Previously presented) A method for producing at least one carbon fiber, the method comprising the steps of:

embedding carbon particles in glass; and
drawing said glass with said embedded carbon particles into a carbon fiber so that said carbon particles are substantially aligned within said carbon fiber.

41. (Original) The invention as defined in claim 40 wherein said carbon particles are carbon nanotube molecules.

42. (New) The invention as defined in claim 40, wherein said embedding step comprises: dispersing carbon particles within a form of liquid glass to form a sol-gel solution; solidifying the sol-gel solution to form said glass with said embedded carbon particles.

43. (New) The invention as defined in claim 42, wherein said drawing step produces a plurality of aligned carbon fibers, the method further comprising the step of expelling glass that is located between and within said aligned carbon fibers.

44. (New) The invention as defined in claim 43, wherein said expelling step comprises twisting said plurality of aligned carbon fibers, whereby said aligned carbon fibers are drawn towards the axis of said fiber.

45. (New) The invention as defined in claim 1, further comprising the steps of:
dispersing said carbon particles within a form of liquid glass to form a sol-gel solution; and
solidifying the sol-gel solution to form a glass body containing therein said carbon particles,
wherein the step of drawing comprises:
drawing said glass body into the at least one carbon fiber.

46. (New) The invention as defined in claim 45, wherein said drawing step produces a plurality of aligned carbon fibers, the method further comprising the step of expelling glass that is located between and within said aligned carbon fibers.

47. (New) The invention as defined in claim 26, further comprising the steps of:
dispersing carbon particles within a form of liquid glass to form a sol-gel solution;
solidifying the sol-gel solution to form a glass body containing therein said carbon particles;
and
incorporating said glass body into a larger glass structure to form a preform, wherein the step of drawing comprises:
drawing the preform into said carbon fiber.

48. (New) The invention as defined in claim 47, wherein said drawing step produces a plurality of aligned carbon fibers, the method further comprising the step of expelling glass that is located between and within said aligned carbon fibers.

49. (New) The invention as defined in claim 48, wherein said expelling step comprises twisting said plurality of aligned carbon fibers, whereby said aligned carbon fibers are drawn towards the axis of said fiber.